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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/404,245	09/22/1999	FRANK O. HARRIS	8675-5	8210

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EXAMINER

BEFUMO, JENNA LEIGH

ART UNIT	PAPER NUMBER
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1771

13

DATE MAILED: 07/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/404,245

Applicant(s)

HARRIS ET AL.

Examiner

Jenna-Leigh Befumo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 May 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-25,27,28,30-33,48-59,63-65 and 67-88 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

- 6) ☒ Claim(s) 17-25,27,28,30-33,48-59,63-65 and 67-88 is/are rejected.

- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Amendment B, submitted as Paper No. 12 on May 7, 2002, has been entered. Claims 26, 29, and 66 have been cancelled. Claims 17, 28, 30, 48, 59, and 63 – 65 have been amended and claims 67 – 88 have been added. Therefore, the pending claims are 17 – 25, 27, 28, 30 – 33, 48 – 59, 63 – 65, and 67 – 88.
2. Applicant's arguments (Amendment B, pages 8 – 11) are sufficient to overcome the 35 USC 112 1<sup>st</sup> rejections set forth in sections 6 – 9 of the previous Office Action.
3. Applicant's arguments and amendments are sufficient to overcome the 35 USC 112 2<sup>nd</sup> paragraph rejections set forth in sections 12, 14, and 15 of the previous Office Action. Additionally, cancellation of claims 26 and 29 renders moot the 112 2<sup>nd</sup> paragraph rejections.
4. The cancellation of claims 26, 28, and 66 renders moot the 35 USC 102 rejections set forth in the previous Office Action. Additionally, Amendment B is sufficient to withdraw the 35 USC 102 rejections to claims 48 – 59 and 64 since the elastomeric and non-elastomeric components in the fiber taught by Makimura et al. are not exposed to the surface of the fiber. Also the denier of the elastomeric filaments are not the same as the denier of the non-elastomeric filaments.

### ***Claim Rejections - 35 USC § 102***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 17 – 25, 28, 30 – 33, 63, and 65 stand rejected under 35 U.S.C. 102(b) as being anticipated by Makimura et al. (4,663,221) for the reasons of record.

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7. Claims 17 – 25, 28, 30 – 33, 48 – 59, 63 – 65, 67 – 75, and 82 – 88 are rejected under 35 U.S.C. 102(b) as being anticipated by Gillespie et al. (5,783,503).

The features of Gillespie et al. have been set forth in section 19 of the previous Office Action. Claims 17 – 25, 28, 30 – 33, 48 – 59, and 63 – 65 are rejected for the reasons set forth in the previous Office Action. Newly added claims are rejected based on Figure 1 which shows that the segments are all approximately the same size or denier and the segments alternate between the two types of polymer so that there are the same number segments of each component. Therefore, claims 67 – 75 and 82 – 88 are rejected.

***Claim Rejections - 35 USC § 103***

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claim 27 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Makimura et al. or Gillespie et al. for the reasons of record.

10. Claims 76 – 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie et al in view of Pike et al. (5,759,926).

The features of Gillespie et al. have been set forth above. Although Gillespie et al. suggests variations on the segmented pie configurations can be used (column 4, lines 31 – 35), Gillespie et al. fails to teach segmented oval, rectangular, ribbon, or multilobal multicomponent structures. Pike et al. is drawn to splittable multicomponent fibers. Pike et al. Discloses that the multicomponent fibers can have various configurations such as round fibers as shown in Figure 2, or rectangular, oval or multilobal shapes can also be useful (column 5, lines 16 – 18). Further Pike et al. discloses that rectangular or ribbon shape fibers provides higher surface area that can

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be exposed to the splitting medium and facilitate easier splitting of the components (column 5, lines 16 – 28). Therefore, it would have been obvious for one having ordinary skill in the art to change the shape of the multicomponent fiber to an oval, rectangular, multilobal, or ribbon shape as taught by Pike et al. to produce products with different texture due to the difference in shape and to produce fibers which are easier to split apart. Therefore, claims 76 – 79 are rejected.

11. Claims 79 – 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie et al. in view of Hagewood. “Ultra Microfibers: Beyond Evolution,” IFJ. pp 47 – 48.

The features of Gillespie et al. have been set forth above. Although Gillespie et al. suggests variations on the segmented pie configurations can be used (column 4, lines 31 – 35), Gillespie et al. fails to teach segmented oval, rectangular, ribbon, or multilobal multicomponent structures. Pike et al. is drawn to splittable multicomponent fibers. Hagewood is drawn to splittable fibers. Hagewood discloses splittable multicomponent fibers comprising non-elastic and elastic components where the non-elastic component is placed on the tips of a trilobal or delta cross section (page 48). The split fiber produced has over 100% elastic stretch and appears similar to a core/spun yarn except the processing costs are reduced (page 48). Therefore, it would have been obvious for one having ordinary skill in the art to produce a multilobal cross section fiber as taught by Hagewood with the non-elastic and elastic multicomponent fiber taught by Gillespie et al. to produce a fiber with high elasticity and the appearance of a core/spun yarn at a lower cost. Thus, claims 79 – 81 are rejected.

#### ***Response to Arguments***

12. Applicant's arguments filed May 7, 2002, have been fully considered but they are not persuasive. The Applicant argues that the invention taught by Makimura et al. differs

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structurally from the Applicant's invention since a third component is dissolved from the Makimura et al. fiber to produce the fiber bundle comprising the non-elastic and elastic components (Amendment B, pages 12 – 15). First, as set forth in the previous Office Action the limitations in claims 17 – 25, 28, 30 – 33, 63, and 65 reciting the structure of the fiber before the fiber bundle was created are not given patentable weight. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself, i.e., the fiber bundle. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same or an obvious variant from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the Applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983). Thus, whether the two-component fiber bundle is formed by splitting a fiber comprising only two components or by dissolving a third component from a three-component multicomponent fiber, the structure of the fiber bundle itself is what the determination of patentability is based on. Hence, all limitations drawn to the fiber from which the fiber bundle was produced or the method of producing the fiber bundle are not given patentable weight.

Therefore, the fiber bundle taught by Makimura et al. and shown in Figure 4 having bulked non-elastic components which are longer than the elastic component read on the fiber bundle claimed by the Applicant, whether the third component is dissolved before or after the fiber has been made into a fabric. Makimura et al. teaches that the material shrinks when the third component is dissolved since the elastic fibers return to a taut state and the non-elastic

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fibers are allowed to be slack (column 5, lines 34 – 38). In other words, the elastic fibers unstretched position due to the release on tension produced by the third component which was holding the elastic component in a stretched position. At the same time the non-elastic component is allowed to relax and becomes slack and bulky, as well as longer than the elastic component. Finally, during processing of the fiber, before the third component is dissolve, the non-elastic component is inherently plastically deformed to some degree due to the forces acting upon the polymer during extrusion and drawing or attenuating steps which occur after extrusion. Thus, the rejection over Makimura et al. is maintained.

13. The Applicant argues that Gillespie et al. does anticipate the Applicant's invention since Gillespie et al. discloses forming nonwoven fabrics by spun bonding techniques (Amendment B, page 16). First, with respect to claims 48 – 59 which are drawn to a multicomponent fiber, all limitations recited in those claims drawn towards what occurs after the fiber is split are not positive limitations which manipulatively effect the structure of the fiber, which is the article claimed. Instead those limitations structurally effect the structure of the fiber bundle, which is not being claimed by the Applicant in those claims. Thus, any structurally limitations drawn to what occurs to the fiber after the fibers are split are not given patentable weight with respect to the multicomponent fiber claimed. Thus, Gillespie et al., which teaches a multicomponent fiber having a non-elastic component and an elastic component both exposed on the surface of the fiber anticipates the Applicant's claims. Further, Gillespie et al. discloses that the fiber can either be used to create spunbond nonwovens or the fiber can be used to produce continuous textile yarns and tow for staple (column 3, lines 43 – 45). In other words, the fibers can be used in extrusion processes other than spun bonding. Additionally, the Applicant discloses in the

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specification that the fibers of this invention can be prepared using any method of fiber formation (page 14, lines 17 – 18), and specifically teaches using the fiber to produce direct-laid nonwoven fabrics by known spun bonding or melt blowing process (page 18, lines 20 – 29). Hence, the spun bonding fabric produced by Gillespie et al. would produce the same fabric as that taught by the Applicant.

Further, Gillespie et al. fails to limit the fibers to being processed by only spun bonding techniques. As set forth above, Gillespie et al. discloses that continuous filament yarns or staple tows can be produced by the fibers. These fiber would be produced by known extrusion techniques which include drawing and attenuating steps which would inherently plastically deform the non-elastic segments (column 2, lines 45 – 50). Thus, the fibers would inherently have the properties claimed, i.e., the non-elastic segments would be longer and bulky, as well as surround and cover from view the elastic segments. Therefore, the rejections over Gillespie et al. are maintained.

14. Finally, the Applicant argues that since Makimura et al. and Gillespie et al. fail to teach the claimed fiber structure than the fibers would not comprise the claimed visual effect due to the non-elastic fibers being dyed a different color than the elastic fibers. However, as set forth above, it is felt that both Makimura et al. and Gillespie et al. teach the claimed fiber bundle structure. Further, it is felt that as set forth in the previous Office Action it would have been obvious to one of ordinary skill in the art to dye the multicomponent fiber bundle different colors to create various design patterns, or to dye the fiber with a single dye, to save money, which would inherently produce different color elastic and non-elastic components since the different polymers would absorb the dye differently. Thus, the rejections are maintained.



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**Conclusion**

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Befumo whose telephone number is (703) 605-1170. The examiner can normally be reached on Monday - Friday (9:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Jenna-Leigh Befumo  
July 20, 2002



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